ABSTRACT

The present invention provides a RF-lightwave modulator with improved efficiency by making use of a broken loop resonator having a gap therein. In the present invention a RF input signal is coupled into a broken loop resonator, thereby producing a RF output signal. An optical modulator connected across the gap receives the RF output signal and modulates a lightwave with the RF output signal to produce a RF modulated lightwave. Because the optical modulator is connected across the gap in the broken loop resonator, the voltage of the RF output signal applied to the optical modulator will be greater than the voltage of the RF input signal applied to the broken loop resonator.